

1 **D. AMENDMENTS TO THE DRAWINGS**

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3 This response includes replacement drawings labeled as such.

4 Sheet 1 of the replacement drawings has amended Figure 3C to replace

5 reference character 54 by reference character 53 as to the center

6 hole element, thereby avoiding a dual numbering of the center hole

7 element with the threaded rod element. This amended replacement

8 drawing includes all of the figures appearing on the immediate prior

9 version of the sheet. This amended replacement drawing has also added

10 the term Prior Art to Figures 1 and 2 and 3c of sheet 1. Figures 3a

11 and 3b have been designated as Prior Art in the original sheet 2 of

12 the drawings so no amendment is needed in this regard. However, a

13 replacement drawing of sheet 2 is provided with this response for the

14 Examiner's convenience.

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1 **E. REMARKS**

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3 Reconsideration is requested of the office action of August 26,
4 2005, in view of these Remarks, the complete listing of all claims
5 including new claim 10 and their proper status identifiers, the
6 amendments to the claims, the amendment to the specification, and
7 replacement drawings, all of which places this application in
8 condition for allowance.

9 **1. AMENDED CLAIMS 1-3 NOW OVERCOME THE INDEFINITENESS REJECTION**
10 **UNDER 35 U.S.A. 112, SECOND PARAGRAPH.**

11 Applicant has followed the suggestion of the examiner and has
12 carefully amended Claims 1-3 to make sure that all references back to
13 elements already listed in the claims are preceded by "said" or by
14 the definite article "the".

15 Accordingly, this ground of rejection should be withdrawn.

16 **2. AMENDED CLAIMS 1-9 AND NEW CLAIM 10 ESTABLISH THE NON-**
17 **OBVIOUSNESS OF APPLICANT'S INVENTION OVER CITED REFERENCE PATENT NO.**
18 **5,559,409 TO BEIERWALTES ET AL.**

19 A. The elements of Claims 1-10 provide complete enclosure of
20 applicant's elastic spring means and the Beierwaltes et al reference
21 has no structure providing complete enclosure of its gas springs.

22 One of the primary objects of applicant's invention is to provide
23 complete enclosure of the elastic spring means for protection against
24 weather elements which cause corrosion and deterioration. In
25 contrast, the Beierwaltes et al. reference fails to disclose any
26 means for providing **complete** enclosure of its gas springs. As stated
27 in Beierwaltes et al., column 5, lines 16-19:

28 " Additionally, although not illustrated, the upper and lower

1 "gas springs 46,48 may be mounted within a **partially enclosed**
2 channel ... " (emphasis added)

3 Thus, there can be no complete protection from weather elements,
4 if any protection at all, provided by the Beierwaltes et al.
5 reference.

6 The amendments to Claims 1-10 specify with particularity all the
7 elements needed to provide complete enclosure of applicant's elastic
8 spring means when the trailer ramp door is closed, thereby providing
9 complete protection from weather elements.

10 It is settled patent law that the issue of obviousness must be
11 determined not only as to differences between prior art and the
12 claimed invention, but also whether the claimed invention as a whole
13 would be obvious, as held by the Court of Appeals for the Federal
14 Circuit in *Jones v. Hardy*, 727 F.2d 1524, 1529 (Fed.Cir. 1984), as
15 follows at page 1529:

16 "4. Test Under § 103

17 The test under § 103 is not whether an improvement or a use set
18 forth in a patent would have been obvious or nonobvious. The
19 test is whether the claimed invention, considered as a whole,
20 would have been obvious or nonobvious. 35 U.S.C. § 103; *Carl*
21 *Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 785, 218 USPQ 698,
22 700 (Fed. Cir. 1983). Failure to consider the claimed invention
23 as a whole is an error of law. *W. L. Gore, supra*, 721
24 F.2d 1540, 220 USPQ at 309 (error in considering claims in less
25 than their entireties)."

26 Applicant's invention as a whole is directed to provide complete
27 protection of its elastic spring means from weather elements to
28 prevent corrosion and deterioration. No such objective is disclosed
in the Beierwaltes et al. reference nor is there any structure
disclosed therein to provide the complete protection recited in
Claims 1-10.

1 It is also settled patent law that the prior art must be
2 considered as a whole. In the case of *Bausch & Lomb, Inc. v. Barnes-*
3 *Hind/Hydrocurve*, 796 F2d 443, 448 (Fed.Cir.1986), the Federal Circuit
4 held:

5
6 " Barnes-Hind selected a single line out of the Caddell
7 specification to support the above assertion: 'one way in which
8 this [forming ridgeless depressions] can be achieved is to use a
9 laser with high enough intensity to vaporize the plate material
10 without melting it.' Col. 5, lines 53-54. This statement,
11 however, was improperly taken out of context. As the former Court
12 of Customs and Patent Appeals held:

13 It is impermissible within the framework of section 103 to pick
14 and choose from any one reference only so much of it as will
15 support a given position to the exclusion [**15] of other parts
16 necessary to the full appreciation of what such reference fairly
17 suggests to one skilled in the art.

18 *In re Wesslau*, 53 C.C.P.A. 746, 353 F.2d 238, 241, 147 U.S.P.Q. (BNA) 391, 393 (CCPA 1965);
19 *see also In re Mercier*, 515 F.2d 1161, 1165-66, 185 U.S.P.Q. (BNA) 774, 778 (CCPA 1975)."

20 Under the foregoing authorities, it is impermissible to pick the
21 above quoted excerpt from the Beierwaltes et al. reference without
22 including the rest of this patent reference so that full appreciation
23 can be given to what is suggested in this patent.

24 In the case of *Ex parte Petersen*, 228 USPQ 217, 218
25 ((Bd.Pat.App.& Int. 1985), the examiner's 103 rejection was reversed,
26 and the Board stated at page 218 of 228 USPQ:

27 "It is axiomatic that not only must claims be given their
28 broadest reasonable interpretation consistent with the
specification but also **all limitations must be considered**. Here
the examiner's characterization of certain specific limitations
or parameters as obvious does not make appellant's invention,
considered as a whole, obvious. See *In re Saether*, 492 F.2d

1 "849, 181 USPQ 36, 39 (CCPA 1974); *In re Antonie*, 559 F.2d 618,
2 195 USPQ 6 (CCPA 1977)." (emphasis added)

3 In the present application, all of the claims as amended
4 including new claim 10 have the limitations either contained in
5 amended claim 1 in plural form or in amended claim 7 in singular form
6 with claim 1 reciting:

7
8 " a pair of side members of a trailer rear entrance frame to
9 which said trailer ramp door is attached, said pair of side
10 members each having openings formed on each of their top
11 surfaces, each of said openings formed to receive each of said
12 elastic spring means and formed to **completely enclose** each of
13 said elastic spring means in conjunction with said trailer
14 ramp door when said trailer ramp door is closed;..."

15 (emphasis added)

16 **B. Nothing in the Beierwaltes et al reference suggests the**
17 **desirability or motivation to provide a completely enclosed device to**
18 **protect it from weather elements and this absence renders Claims 1-10**
19 **non-obvious.**

20 In the case of *In re Newell*, 13 USPQ2D 1248, 1250 (Fed.Cir. 1989)
21 the Court of Appeals for the Federal Circuit reversed the Board of
22 Patent Appeals and Interferences affirmance of the examiner's
23 rejection of claims under 35 U.S.C. 103, and held:

24 "There is no suggestion or motivation in the prior art to combine
25 these elements as combined by Newell, in order to obtain enhan-
26 ced tape velocity and acceleration. See *In re Laskowski*, 871
27 F.2d 115, 117, 10 USPQ2d 1397, 1398-99 (Fed. Cir. 1989);
28 *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227
USPQ 543, 551 (Fed. Cir. 1985). The motivation to make a
specific structure "is not abstract, but practical, and is
always related to the properties or uses one skilled in the art
would expect the [structure] to have, if made." *In re Gyurik*,
596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979). See also

1 " *Fromson v. Advance Offset Plate*, 755 F.2d 1549, 1556, 225 USPQ
2 26, 31 (Fed. Cir. 1985) ("The critical inquiry is whether 'there
3 is something in the prior art as a whole to suggest the
4 desirability, and thus the obviousness, of making the
5 combination.'" (Emphasis in original).

6 [2] In *In re Wright*, 848 F.2d 1216, 6 USPQ2d 1959 (Fed. Cir.
7 1988), we discussed the need, in comparing the differences
8 between the structure and properties taught in the prior art,
9 and those of the applicant's invention, to include consideration
10 of the problem solved by the inventor. "The determination of
11 whether a novel structure is or is not 'obvious' requires
12 cognizance of the properties of that structure and the problem
13 which it solves, viewed in light of the teachings of the prior
14 art." *Id.* at 1219, 6 USPQ2d at 1961-62. See *In re Rothermel*,
15 276 F.2d 393, 397, 125 USPQ 328, 332 (CCPA 1960):

16 Where the invention for which a patent is sought solves a problem
17 which persisted in the art, we must look to the problem as well
18 as to its solution if we are to properly appraise what was done
19 and to evaluate it against what would be obvious to one having
20 the ordinary skills of the art.

21 [3] Applying this precedent to Newell's invention, there is no
22 teaching or suggestion in the prior art that the belt drive of
23 Weiss should be applied to the capstan of an ANSI type of tape
24 cartridge in the manner done by Newell, in order to achieve the
25 significant advantageous property obtained by Newell.

26 On consideration of all the evidence of record, we conclude that
27 Newell's claims meet the requirements of section 103. The
28 Board's decision to the contrary is *REVERSED*."

1 Just as in the *Newell* case, there is nothing in the *Beierwaltes*
2 et al. reference to suggest or to provide a completely enclosed
3 elastic spring means as claimed by applicant. Nor does the
4 *Beierwaltes et al.* reference teach or even discuss the problem solved
5 by applicant's invention, which is to protect an elastic spring means
6 from weather elements. There is nothing in the *Beierwaltes et al.*
7 reference to even suggest the desirability of protecting a device
8 from weather elements.

9 For the above reasons alone, the rejection based on the

1 Beierwaltes et al. reference should be withdrawn.

2 **C. Since the Beierwaltes et al. reference is from a different**
3 **field of endeavor (windows) and not reasonably pertinent to the**
4 **particular problem solved by applicant in the present application,**
5 **the Beierwaltes et al. reference is non-analogous art which requires**
6 **withdrawal of the rejection based on this reference.**

7
8 As shown by the accompanying declaration of Fernando Calderon, an
9 expert engineer specializing in designs of door products and a co-
10 inventor of the invention entitled APPARATUS FOR CONTROLLING VARIOUS
11 MOVEMENTS OF A DOOR, US Application SN 10/452,242, the Beierwaltes et
12 al. reference is non-analogous art for several reasons.

13
14 The Calderon declaration (Par. 8) shows that he reviewed various
15 patents relating to apparatus for controlling movements of a door.
16 None of these patents disclosed any subject matter relating to window
17 frames or to biasing a window panel by a gas spring. He did not
18 search for or review patents or prior art relating to window frames
19 or to biasing a window panel by means of a gas spring.

20
21 Mr. Calderon further stated in his declaration (Par.12) that he
22 would have no motivation to look to automated window systems using
23 gas springs to bias a window panel outward from a frame to solve a
24 problem of protecting a mechanical spring mechanism for a ramp door
25 from weather elements by completely enclosing it.

26
27 {Note. Attached Exhibit A comprises a definition of a spring in
28 an authoritative Dictionary of Mechanical Engineering as:

1 "spring A piece of bent or coiled metal with elastic properties."
2 This definition shows that applicant's elastic spring means is
3 substantially different in properties and in construction from the
4 gas springs or pistons disclosed in the Beierwaltes reference)
5

6 Mr. Calderon's declaration (Par. 10) also shows that Beierwaltes
7 et al. has no problem or object stated to protect a mechanical spring
8 mechanism from corrosion by weather elements by completely enclosing
9 it. [Note- there is nothing in Beierwaltes et al. of any means to
10 protect the gas springs (pistons) from weather elements]
11

12 Further, Mr. Calderon's declaration (Par.13) states that the
13 Beierwaltes patent is without any illustration or meaningful
14 disclosure showing details of how gas springs may be mounted in a
15 partially enclosed channel for complete concealment. This absence of
16 disclosure would prevent Mr. Calderon from arriving at the invention
17 of a mechanical spring mechanism which is completely enclosed when
18 the ramp door is closed, thereby providing complete protection from
19 weather elements.
20

21 Mr. Calderon's declaration (Par.14) notes that the Beierwaltes
22 patent has no disclosure of complete enclosure of the gas springs or
23 pistons for protection from weather elements but only complete
24 concealment. Mr. Calderon further stated in his declaration that
25 concealment does not suggest and is not the equivalent of complete
26 enclosure for protection from weather elements.
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1 It is settled patent law that only references from arts analogous
2 to that of the claimed invention comprise prior art to the invention.

3 The foregoing discussion and Calderon declaration establish that
4 the Beierwaltes et al. patent reference is from a different field of
5 endeavor and is not reasonably pertinent to the particular problem
6 solved by the inventor. The law is well stated by the Federal Circuit
7 in the case of *In re Oetiker*, 977 F.2d 1443, 1447; 24 USPQ2d 1443,
8 1445-6 (Fed.Cir. 1992), as follows in reversing a rejection based on
9 35 USC 103 because the prior art was non-analogous:
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12 " In order to rely on a reference as a basis for rejection of the
13 applicant's invention, the reference must either be in the field
14 of the applicant's endeavor or, if not, then be reasonably
15 pertinent to the particular problem with which the inventor was
16 concerned. See *In re Deminski*, 796 F.2d 436, 442, 230 USPQ 313,
17 315 (Fed. Cir. 1986). Patent examination is necessarily conducted
18 by hindsight, with complete knowledge of the applicant's
19 invention, and the courts have recognized the subjective aspects
20 of determining whether an inventor would reasonably be motivated
21 to go to the field in which the examiner found the reference, in
22 order to solve the problem confronting the inventor. We have
23 reminded ourselves and the PTO that it is necessary to consider
24 'the reality of the circumstances', *In re Wood*, 599 F.2d 1032,
25 1036, 202 USPQ 171, 174 (CCPA 1979) -- in other words, common
26 sense -- in deciding in which fields a person of ordinary skill
27 would reasonably be expected to look for a solution to the
28 problem facing the inventor.

23 It has not been shown that a person of ordinary skill, seeking
24 to solve a problem of fastening a hose clamp, would reasonably be
25 expected or motivated to look to fasteners for garments. The
26 combination of elements from nonanalogous sources, in a manner
27 that reconstructs the applicant's invention only with the benefit
28 of hindsight, is insufficient to present a prima facie case of
obviousness. There must be some reason, suggestion, or motivation
found in the prior art whereby a person of ordinary skill in the
field of the invention would make the combination. That knowledge
can not come from the applicant's invention itself. *Diversitech
Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79, 7 USPQ2d

1 "1315, 1318 (Fed. Cir. 1988);
2 In re Geiger, 815 F.2d 686, 687, 2 USPQ2d 1276, 1278 (Fed. Cir.
3 1987); Interconnect Planning Corp. v. Feil, 774 F.2d
4 1132, 1147, 227 USPQ 543, 551 (Fed. Cir. 1985)."

5 Applicant has established by the Calderon declaration and the
6 disclosure of Beierwaltes et al. that a person of ordinary skill
7 would NOT be motivated or be reasonably expected to look to gas
8 springs partially enclosed in a biased arrangement to close a frame
9 in a window to solve a problem of protecting a mechanical spring
10 mechanism by completely enclosing it when a trailer ramp door is
11 closed to protect it from weather elements.

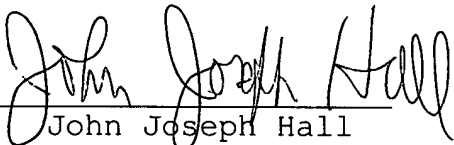
12 In this connection, the present specification refers to the
13 weight of the ramp door as being 180 lbs (specification page 8, line
14 17), and the capacity of the elastic spring means as having an
15 effective tensile strength of about 165-185 lbs. with a load capacity
16 of about up to 340 lbs (specification page 5, lines 20-22). No such
17 parameters are disclosed or suggested by the Beierwaltes et al.
18 reference and the gas springs disclosed therein have no capacity such
19 as the elastic spring means disclosed and claimed in the present
20 application.
21
22

23 Under the foregoing facts and legal authority, applicant submits
24 that the Beierwaltes et al. reference is non-analogous art which
25 requires withdrawal of the 35 USC 103 rejection.
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28

1 **CONCLUSION**

2 In view of the amendments to the claims, amendment to the
3 specification, amendments to the drawings, submission of replacement
4 drawings, the accompanying declaration of Fernando Calderon, a person
5 of ordinary skill in the relevant art involved in the present
6 application, applicant's Remarks citing facts and legal authorities
7 establishing that 35 USC 112, first paragraph and the 35 USC 103
8 rejections should be withdrawn, applicant submits that the present
9 application is in condition for allowance and such action is
10 respectfully requested.
11
12

13 Respectfully submitted,

14
15 
16 _____
17 John Joseph Hall
18 Attorney for Applicant
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Dictionary of Mechanical Engineering

Fourth Edition

G.H.F. Naylor

MSc, CEng, MIMechE, MRAeS

Society of Automotive Engineers, Inc.
Warrendale, Pa.

Butterworth-Heinemann
Oxford Boston Johannesburg
Melbourne New Delhi Singapore

EXHIBIT

A

split skirt piston (U.S.) See *slotted piston*.

split wheel A split *cog-wheel*, split for a use similar to a *split pulley*.

spoke (a) A radial bar of a wheel or of a steering-wheel of a vehicle. (b) A rung of a ladder. (c) An arm of a running wheel of a locomotive or rolling stock. (d) A brace between the *hub* of a *wheel* and its *rim*.

spoke machine A copying machine or lathe with two sets of centres having a *plate* in the one and the piece of work in the other, a roller moving on the *plate* and a cutter following, being set in the same slide rest. Cf. *routing machine*.

spool (a) A gas-turbine engine which has two compressors driven separately by two turbines is called a two-spool jet-engine: hence the terms single-spool compressor and two-spool compressor (Cf. *compound engine*.) The highest practical compression ratio of a single-shaft engine is about 7 to 1, but a two-spool engine may be more than 9 to 1. See *axial compressor*; *compression ratio*. (b) A reel or reel for winding yarn, etc. See also *bobbin*. (c) A reel for photographic film.

spool valve A *piston valve*. See *valve*; *piston valve*.

spot face A surface machined flat around a hole in a casting or other non-flat ream to aid the seating of a washer, bolt head or nut.

spotting (a) *Turning* a short length of a *bar* or a *forging* to form a *journal* that can be supported in a *steady*. (b) Finishing a flat surface with a regular pattern of circular patches; as for a clock or watch.

spotting drill A *centre drill*.

sprag clutch See *clutch*.

spray-up The spraying of plastic matrix material into a mold during the production of a molded *composite material* item.

spreadboard An endless belt upon which handfuls of sorted flax fibre are laid for conversion into *sliver*.

spreader In a *double disc gate valve* the "upper spreader" is the component attached to, or engaging, the actual thread of the stem and the "lower spreader" is its complementary component. Together in conjunction with the stop in the body they constitute the spreading mechanism to force the discs apart against the body seats when the valve is closed.

spring A piece of bent or coiled metal with elastic properties. See *below* and *below* *spring*; *carriage spring*; *compression spring*; *conical spring*; *helical spring*; *leaf spring*; *progressive spring*; *ring spring*; *scragged spring*; *spiral helical spring*; *spiral spring*; *tension spring*; *torsion bar suspension*; *volute spring*; *springs, disc*.